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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/552,252	04/18/2000	Peggy G. Lemaux	5830-3	3070

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EXAMINER

HELMER, GEORGIA L

ART UNIT	PAPER NUMBER
1638	15

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/552,252

Applicant(s)

LEMAUX ET AL.

Examiner

Georgia L. Helmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. The Office Action of 19 November 2002 has been vacated and is replaced with this action. Any inconvenience to Applicant is regretted.

Status of the Claims

2. Claims 1-8 and 10-42 are pending.
3. Receipt of Applicant's Terminal Disclaimer with respect to US 6,235,529 is acknowledged; this document has been entered into the file.

Claim Rejections - 35 USC § 112-second paragraph

4. Claims 1-8 and 10-42 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear whether "a cell of green regenerative tissue" means the cell is obtained from green regenerative tissue or the cell comprises green regenerative tissue. It is suggested that the above phrase be amended to "a plant cell".

Applicant traverses, stating primarily that the phrase "green regenerative tissue" has been amended to "a plant cell of green regenerative tissue".

Applicant's traversal has been considered and is unpersuasive because Applicant's amendment addresses one issue, the "cell" issue. However, what is lacking is any teaching of how to differentiate "green" tissue from "nongreen" tissue. In plant cell and tissue culture, tissue is produced which is often a yellowish or yellow green color. This is especially true of callus. How does one distinguish yellow from green,

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when the various colors form a continuum, and not a dichotomy? This issue caused the Office to interpret "green regenerative tissue" as "callus tissue" in the 35 USC 102 (b) of the initial Office Action.

Applicant has not set forth a working definition of "green regenerative tissue"; various qualities of green regenerative tissue are recited: it may be referred to as green callus tissue (specification p.2 –p. 3 line 1). Furthermore, dim light permits one to "screen for green portions of the callus (for barley, for example; yellow-green for wheat) which are more likely to be regenerable" (specification p. 4 lines 24-28). Applicant further states that "callus quality (color and morphology) was assessed microscopically 2-3 weeks after initial callus induction; for morphology, a score of +4 (highest quality) was given to shiny, compact, nodular callus, and as score of +1 was given to soft, friable callus. Color was judged from slightly brown-colored callus (+4) to white (+1)". See specification p. 17, last ¶; no teaching of where green callus would fall on the recited color scale was given.

Claim Rejections - 35 USC § 102

5. Claims 1-8, 10-16, 25-27, 29-31, 33-37 and 39-42 are rejected under 35 USC 102 (b) as being anticipated by Wan, Y and Lemaux, PG (Plant Physiol 104: 37-48 (1994)) and Vasil, US 5,405,765.

The Office interprets callus as being "green regenerative tissue", because of the indefiniteness of the term (green regenerative tissue). See discussion supra.

Applicant traverses, stating primarily that green regenerative tissue is definite. Applicant's traversal has been considered and is unpersuasive for the reasons discussed above.

Applicant traverses, stating primarily (p. 12) that the specification teaches that green regenerative tissue is produced from callus, and that "callus" should be interpreted differently than "green regenerative tissue".

Applicant's traversal has been considered and is unpersuasive because Applicant teaches that green regenerative tissue may be referred to as green callus tissue. This appears to conflict with Applicant's teaching in the paragraphs immediately preceding this.

Applicant traverses, stating primarily that Examiner has mischaracterized the teaching of Wan on several grounds. That in contrast to Examiner statements, the only teaching in Wan regarding dim light refers to the growth of Igri seedlings under dim light (10-15 μ E). And that Igri is a winter cultivar of barley distinct from Golden Promise, a spring cultivar.

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Applicant's traversal has been considered and is unpersuasive because Wan teaches Applicant's arguments are not commensurate in cope with the claims. With the exception of claim 16,, none of the claims recite a specific cultivar of barley.

Applicant traverses, stating primarily that Examiner also stated that Wan teaches the use of dim light for culturing the transformed plant cell. Applicants assert that Wan teaches the culturing under dim light of seedlings, which are grown in soil, not the transformed plant cell. Applicant's traversal has been considered and is unpersuasive because Wan teaches culturing the bombarded tissue under fluorescent lights for a period of time (p. 39, 1st column 1st full ¶ and final ¶) . Applicant's "dim light" limitation in claim 1 lacks a showing of criticality, because "dim light" is recited but no duration is given. Thus, the exposure to "dim light " can vary from infinitely short to infinitely long.

Applicant traverses, stating primarily that the use of dim light by Wan was for the purpose of vernalization, not the culturing of transformed plant cells.

Applicant's traversal has been considered and is unpersuasive because the intended use is given no patentable weight.

Applicant traverses, stating primarily that the Examiner has stated that the use of dim light in Wan is for the culturing of transformed plant cells on an intermediate incubation medium. Applicant further asserts that Wan teaches the use of dim light on seedlings grown in soil, not the culturing of transformed d plant cells on a medium.

Applicant's traversal has been considered and is unpersuasive because Wan teaches cultivation of post-bombardment tissue on callus induction medium (p. 38 column 2, last ¶ bridging to page 39).

Applicant traverses, (p. 15) stating primarily that Vasil does not teach the use of dim light (10-30 μ E) for culturing a transformed plant cell, or for preparing green regenerative tissue from plant tissue, or for the induction of callus from germination seeds.

Applicant's traversal has been considered and is unpersuasive because the limitation of dim light (10-30 μ E), lacking a duration period, is lacking a showing of criticality and is given no weight.

Claim Rejections - 35 USC § 103

6. Claims 1-8, 10-16 and 18-42 are rejected under 35 USC 103 as being unpatentable over Wan, Y and Lemaux, PG (Plant Physiol 104: 37-48 (1994)) and Vasil USP 5,405,765, issued 11 April 1995.

Applicant traverses, stating primarily Examiner has not established a prima facie case of obviousness, that neither of the references teach or suggest all the claims limitations. Neither Wan or Vasil teach one to culture callus, green regenerative tissue or transformed plant cells under light of 10-30 μ E.

Applicant's traversal has been considered and is unpersuasive because, as discussed above, "green regenerative tissue" is unclear, and dim light of 10-30 μ E lacks a showing of criticality.

Applicant traverses, stating primarily that even if Examiner established a prima facie case of obviousness, Applicants assert that secondary factors (long-felt need, failure of others, and unexpected results) described in the specification rebut any a

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prima facie case of obviousness. That unexpected result in the application include successful production of transformed Anza wheat lines at a rate of 4.9%.

Applicant's traversal has been considered and is unpersuasive because the claims are not drawn to any specific transformation rates.

Applicant traverses, stating primarily that neither Wan or Vasil suggested or speculated that the use of dim light of 10-30 μE would reduce the incidence of albinism in cultured barley plants.

Applicant's traversal has been considered and is unpersuasive because the claims are not drawn to method of reducing the incidence of albinism.

Remarks

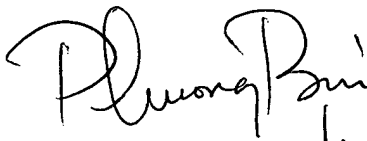
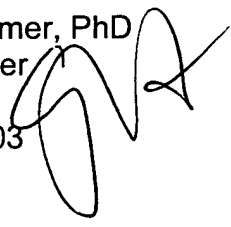
7. No claims are allowed.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Georgia L. Helmer whose telephone number is 703-308-7023. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Georgia L. Helmer, PhD
Patent Examiner
Art Unit 1638
August 11, 2003



PHUONG T. BUI
PRIMARY EXAMINER 8/11/03